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AUTHOR Geenen, Kristin; And Others
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ABSTRACT

This monograph summarizes educational policy trends of the past 5 years in terms of their implications for the educational outcomes of students with disabilities. The first section reviews the gradual development of federal and state policies concerning goal and standard-setting activities, accountability, and large-scale and alternative assessments. The second section examines the participation of students with disabilities in major national and selected state data collection programs, including the National Assessment of Educational Progress; the National Longitudinal Transition Study; the National Education Longitudinal Study of 1988; the National Adult Literacy Survey; the Early Childhood Longitudinal Study; and state assessments in Connecticut, Louisiana, and New York. The final section evaluates data on educational outcomes for students with disabilities at the national and state levels by academic level (preschool, elementary, middle school, secondary, and postsecondary) using the National Center on Educational Outcomes conceptual model. Student educational outcomes were found to be a function of disability type and programming. A conclusion stresses the paucity of data on the educational outcomes of students with disabilities and urges the participation and accommodation of students with disabilities in national and state assessments. (Contains 63 references.) (DB)

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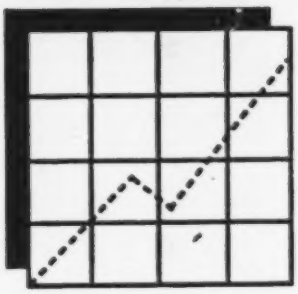

A Disability Perspective on Five Years of Education Reform

National Center on Educational Outcomes

The College of Education and Human Development
UNIVERSITY OF MINNESOTA

in collaboration with

St. Cloud State University
and
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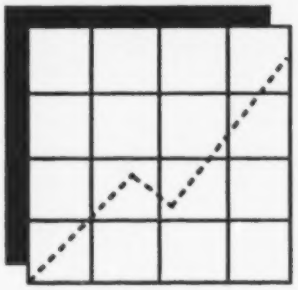

A Disability Perspective on Five Years of Education Reform

Prepared by:
Kristin Geenen, Martha Thurlow, and James Ysseldyke

National Center on Educational Outcomes

The College of Education and Human Development
UNIVERSITY OF MINNESOTA

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The National Center on Educational Outcomes (NCEO), established in 1990, works with state departments of education, national policy-making groups, and others to facilitate and enrich the development and use of indicators of educational outcomes for students with disabilities. It is believed that responsible use of such indicators will enable students with disabilities to achieve better results from their educational experiences. The Center represents a collaborative effort of the University of Minnesota, the National Association of State Directors of Special Education, and St. Cloud State University.

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NCEO Core Staff:

Robert H. Bruininks
Judith L. Elliott
Ron Erickson
Patricia Grafstrom
Kevin S. McGrew
Dorene L. Scott
Patricia Seppanen
Martha L. Thurlow, Assistant Director
James E. Ysseldyke, Director

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NCEO Publications Office
350 Elliott Hall
75 East River Road
University of Minnesota
Minneapolis, MN 55455

A Disability Perspective on Five Years of Education Reform

Much has happened in education during the past five years. There have been increasing demands for high standards and accountability systems to ensure that standards are attained. While many still decry the ills of American education, there is also greater optimism among some in the ability of American schools to prepare youth for the future. Innovations in education have included exploring alternative management and funding styles (e.g., site-based and charter schools) and instructional techniques (e.g., cooperative learning, outcomes based education, etc.). Yet, the standards-based reform initiative is the most widespread effort to improve education. This initiative has been undertaken by federal, state and local policymakers.

Recent education reform, particularly that occurring during the past five years, can also be characterized by a marked increase in involvement of federal and state governments. Whether these larger governing offices are driving reform or merely reflecting the trends apparent at the local level is difficult to ascertain; however, their policies toward education have shifted. In this document, we provide a summary of these policy trends of the past five years, viewed through a lens focusing on the implications of these policy shifts for the educational outcomes of students with disabilities.

Focus on Educational Results

Probably the key terms that could be used to define the past five years of educational reform are words like "results," "outcomes," and "goals." A focus on educational outcomes grew out of increasing dissatisfaction with the results of American education. Reports such as A Nation At Risk (National Commission on Excellence in Education, 1983) confirmed suspicions that, relative to past student performance, American student achievement was dropping. Subsequently, education reformers began to focus on documenting the results of education as a starting point for improving them.

As the focus shifted from the process of education to the outcomes of the educational process, there was increased involvement of federal and state governments in education reform. Previously the domain of local schools, education reform became a priority issue for governors, Congress, and even the president. In order to avoid having to define and then monitor the exact ingredients of educational success, these policymakers emphasized the outcomes of education (Monk, 1992). Many of these policymakers realized that documenting or regulating the educational process (e.g., exposure to curriculum, type of instruction, etc.) is often intrusive, expensive, laborious, and possibly impossible. In addition, there was greater awareness that monitoring the inputs into education (e.g., student-teacher ratio, number of library books or computers, etc.) does not guarantee improvements in student outcomes.

The growing reluctance among policymakers to mandate or regulate procedures reflects the shift from process to outcomes. Many reform experts have noted that you can not mandate "what matters" (Fullan, 1992). Mandates and regulations often lead to reduced creativity and motivation, and re-direct resources away from educating students to monitoring for procedural compliance (David & Goren, 1993; Fullan, 1992). Thus, the general trend in educational policy has been to de-emphasize mandates and increase activities to collect data on student outcomes.

A natural out-growth of the focus on results has been to define appropriate standards for the outcomes of education. Many of these standard-setting activities have been accompanied by attempts to increase the motivation of students and teachers to achieve the standards by attaching consequences to student performance. Large-scale assessments have been the vehicle for

educational accountability. They have been used to monitor progress toward the goals, and as the basis for administering consequences for poor or favorable results.

National and State Goals, Standards, Accountability and Assessments

Goals. At the federal level, the shift in emphasis from process to outcomes is exemplified by the education reform legislation known as *Goals 2000*. *Goals 2000* codified eight national education goals (see Table 1) and provided on-going support to the National Education Goals Panel to monitor progress toward the national goals. The Goals Panel publishes an annual report, Building a Nation of Learners, which documents the nation's progress toward the eight national education goals. The primary sources of data for these reports are federally-funded national assessments such as the National Assessment of Educational Progress (NAEP), the National Educational Longitudinal Study (NELS), the National Adult Literacy Survey (NALS), and the National Household Education Survey (NHES).

Table 1. National Education Goals in Goals 2000

1. *Ready to Learn*: By the year 2000, all children in America will start school ready to learn.
2. *School Completion*: By the year 2000, the high school graduation rate will increase to at least 90 percent.
3. *Student Achievement and Citizenship*: By the year 2000, all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.
4. *Teacher Education and Professional Development*: By the year 2000, the Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.
5. *Mathematics and Science*. By the year 2000, United States students will be first in the world in mathematics and science achievement.
6. *Adult Literacy and Lifelong Learning*. By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
7. *Safe, Disciplined, and Alcohol- and Drug-free Schools*: By the year 2000, every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.
8. *Parental Participation*: By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

In addition to establishing national goals and supporting national assessment efforts, *Goals 2000* was designed to promote similar standards-based reform activities at the state level. States apply for state improvement funds under *Goals 2000*, cycling most of the funds down to local levels to support educational reforms where the students are. An additional opportunity for some states is the provision of regulatory waivers to states via *Goals 2000*. Currently, Kansas, Massachusetts, and Oregon have earned this "education flexibility." They are three of six states that will be granted waivers of federal rules for five years under *Goals 2000* (Hoff, 1995). States that choose to participate in *Goals 2000* are required to establish high-standards for student educational outcomes and to monitor progress toward achieving those standards. Consequently, states are being encouraged to increase their efforts to establish systems of outcomes or goals and on-going statewide assessments.

Currently, 48 states report that they have developed or are in the process of developing a statewide assessment program (Bond & Roeber, 1995). Twenty-seven states have developed state content or performance standards and twenty-two states are in the process of developing such standards (AFT, 1995). However, only eight states report that they have a complete system of learner goals or outcomes and assessments (NCEO, 1995). Therefore, most states are collecting data that do not necessarily pertain to their pre-established state goals or outcomes. Still, most states are moving toward the alignment of standards and assessments. Thirty-three states report progress toward or completion of student assessments aligned to the standards (AFT, 1995). Of the eight states reported to have established a system of standards and outcomes, most aligned their assessments to their state outcome statements (Bond, van der Ploeg, Braskam, & Roeber, 1995; NCEO, 1995). Thus, the general trend is to establish state educational outcomes or standards and then work to align state assessment activity to measure progress toward these outcomes.

Standards. The shift away from the input and process of education to the outcomes of the educational system has allowed policymakers to establish standards by which to compare current educational results. Standards offer a mechanism for increasing accountability in education. The inception of the standard-setting movement may be traced to the National Commission on Excellence in Education (1983) report, A Nation At-Risk. This report documented the falling achievement of American students as compared to past trends and international cohorts. Efforts to establish high standards for student outcomes ensued. These standard-setting efforts have occurred primarily during the past five years, but have had mixed success across the nation. As noted above, many state departments have or are in the process of developing state student outcomes or goals. A recent NCREL survey found that most states have formulated "explicit statements of learner outcomes" for various content areas, including mathematics (31 states completed, eight states in progress), writing (27 states completed, nine in progress), reading (26 states completed, nine in progress), and science (26 states completed, nine in progress) (Bond et al., 1995).

Much of the state standard-setting activity has been influenced by the work of national professional groups that have developed or are currently developing standards for content areas. These content areas include the arts, civics, economics, English, foreign language, geography, history, physical education, science and social studies (Geenen, Scott, Schaefer, Thurlow, & Ysseldyke, 1995). Typically, standards establish a guideline for what students at different grade levels should know and be able to do. The National Council of Teachers of Mathematics (NCTM) established the first nationally-recognized content standards. More recently, NCTM and other standards-setting groups have begun to delineate performance standards that describe "how good is good enough" -- what level of knowledge students need to demonstrate and how well they need to perform. Progress toward content and performance standards is increasingly being measured by alternative assessments, such as performance or portfolio assessments, that are designed to challenge students to actively demonstrate their skills (Simmons & Resnick, 1993). These alternative assessments are discussed in more detail below.

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A third type of standards to receive attention during the past five years of school reform is "opportunity-to-learn standards" (OTL). OTL defines the educational context that is needed for students to be able to achieve content and performance standards. OTL was defined in order to avoid holding students accountable for knowledge or skills that they had not had the opportunity to learn. Accordingly, OTL standards place the responsibility for student outcomes squarely on the educational system. Definitions of OTL typically encompass more than simple exposure to a curriculum. Under some OTL standards, educators are expected to provide enriched educational experiences that meet the diverse needs of individual learners (Ysseldyke, Thurlow, & Geenen, 1994a). Defining and documenting the presence of this process has been problematic. Some have defined indicators of opportunity-to-learn to be allocation of funding or other resources, student time in class or school, content coverage, quality of instructional practices or student academic engaged time (Ysseldyke et al., 1994a). In general, definitions that are most closely linked to the concept of OTL (e.g., quality of instructional practices) are also the most difficult to measure. Additional controversy surrounding OTL is the fear that OTL will lead to undue punishment of teachers or even lawsuits against schools by families of students who were not provided sufficient opportunity-to-learn (Ysseldyke, Thurlow, & Shin, 1994).

Accountability. The establishment of state and local standards allows stakeholders to ask specific questions about the extent to which students are attaining the desired outcomes of education. Policymakers, legislators, school administrators, and the general public want to know whether education is working. Outcomes-based accountability systems, designed to document the effectiveness of education, have become more popular during the past five years of reform. Broadly defined, accountability denotes a system for informing those inside and outside the educational system of the direction in which schools are moving (Westat, 1994). Consequences typically are attached to accountability results and they may be distributed to either individuals (e.g., student, teacher, administrator, etc.) or systems (e.g., program, school, district, etc.) and may include both sanctions (e.g., failure to graduate; loss of personnel, wages or jobs; reduction of school or program funding or autonomy, etc.) and rewards (e.g., public recognition of success, increased funding or wages; increased programmatic autonomy, etc.).

According to the responses of state assessment personnel to the most recent NCREL survey, the vast majority of states have at least one assessment component that provides accountability data. The most popular form of state-level accountability is school performance reporting: 41 states cite this as a major purpose for their assessment activities (Bond & Roeber, 1995). Consequences that states attach to unfavorable school accountability results beyond public reporting generally target the system or program level. These system-level consequences include probation (13 states), accreditation loss (11 states), warnings (8 states), and takeovers (6 states) (Bond et al., 1995). Rewards for favorable school results distributed by some state departments include funding gains (8 states) and exemptions from regulations (4 states) (Bond et al., 1995).

Consequences for the results of accountability measures do not tend to target individuals, with one notable exception. The second most common type of outcomes-based accountability used by states is high school graduation. Seventeen states require students to pass a test in order to graduate with a diploma (Bond & Roeber, 1995). Others, such as Minnesota, are currently developing high school graduation exams. School staff are much less likely than students to receive sanctions or rewards based on state assessment results. Only two states (Kentucky and North Carolina) report distributing financial awards or penalties to individual school personnel based upon assessment results (Bond et al., 1995).

Large-scale and alternative assessment. Both the standards-setting and the accountability movements have been implicated in the increasing popularity of large-scale assessments. During the past five years, there have been dramatic changes in state assessment programs. These changes include an increase in the prevalence and types of state assessments (e.g., norm referenced, criterion referenced, alternative assessments). An increase has occurred in both the number of

states that assess student outcomes and the number of assessments administered by each state. According to the responses of state directors of assessment to an NCREL survey, 40% of the current state assessment components were first implemented sometime during the past five years (Bond et al., 1995). Assuming few assessment components have been dropped since 1990, these 45 relatively new assessment components represents a 68%[1] increase in state assessment activity.

The types of skills targeted by standards and accountability programs have also promoted the development of new forms of large-scale assessment. Traditional (multiple-choice) assessments have been criticized for their emphasis on rote memorization or test-taking skills. Current standards for student outcomes typically include mastery of higher-order skills that may not be easily assessed by traditional methods. Alternative assessments such as portfolios and performance often require students to construct rather than choose an answer and may involve group work and/or the development of a methodological log to document student decision making. Thus, these assessments are designed to measure higher-order skills, such as communication, problem-solving and synthesis of information. The objective of these alternative assessments is to challenge students to perform authentic tasks that reflect the increasing complexity of jobs in the work force and the current trends in teaching. Currently popular teaching techniques, such as cooperative learning, often stress the development of complex and higher-order skills. An accountability program that assesses the skills targeted by classroom teachers is likely to gain widespread approval. In addition, some proponents of alternative assessments argue that performance assessments are not only more aligned to the curriculum, but may become a critical part of the curriculum. According to one such professional:

> You don't give kids tests, you give them tasks. And in giving them tasks you aren't taking time away from class work, this is the class work (ASCD, 1992).

Critics of alternative assessments cite faults in standardization necessary for drawing comparisons across classrooms, schools, districts and states. In addition to technical and psychometric concerns, alternative assessments generally cost more than traditional assessments (O'Neil, 1992). A recent study found performance tests to cost more than 20 times the cost of traditional multiple-choice assessment ("Educators Weigh," 1996).

Currently, 42 states have created some type of alternative or non-multiple-choice assessment, and two additional states are planning to develop such a measure (Bond et al., 1995). States are using a wide range of alternative assessments, including portfolios, group performance assessments, individual projects or demonstrations, and short-answer open-ended response items (Bond et al., 1995).

Students with Disabilities and the Focus on Results

Students with disabilities have had greater access to general education programs since the 1976 passage of P.L. 94-142. Yet the increased participation of students with disabilities in general education classrooms has not been reflected in much of the policy guiding general education (McLaughlin, Schofield, & Warren, in press). Rather, special and general education have developed as parallel systems, often with their own policies, management, evaluation-monitoring system and advocacy groups (Ysseldyke, Reynolds, & Weinberg, 1984). This trend may be changing. During the past five years, a number of federal and state policies promise greater consideration of students with disabilities within the development and implementation of reform programs such as goal and standard-setting activities, accountability, and large-scale assessments.

[1]This figure is based on the responses listed by NCREL to the question: When was this assessment component, in basically this form, first used in schools?

Goals. Recent federal legislation is very specific about who is to be included in reform programs. Section 3(1) of *Goals 2000* states that:

> The terms "all students" and "all children" mean students or children from a broad range of backgrounds and circumstances, including...students or children with disabilities. (U.S. Congress, 1993)

Consequently, *Goals 2000* transcends programmatic boundaries and requires those involved in developing reform policy to consider the best interest of all students, including those with disabilities. The *Goals 2000* commitment to improve the educational outcomes of students with disabilities alongside students without disabilities is a divergence from previous federal policy that targeted specific populations of students or services. This change in policy is likely to appear within subsequent federal legislation (Skarloff, 1994). In addition, entitlement programs for specific populations of students are likely to align themselves with Goals 2000 directives in order to transform the "current programmatically driven education system into an education system for all children" (OSEP, 1995). For example, the reauthorization of ESEA (now called the Improving America's Schools Act) requires programs to adopt standards and assessments for students or schools participating in Title I programs. In addition, recommendations for the reauthorization of IDEA suggest that special education law will align IDEA to Goals 2000, including a demand for the increased participation of students with disabilities in large-scale assessments and high standards.

Goals 2000 designates $600,000 for conducting an evaluation of the effects of Goals 2000 and other federal legislation (e.g., School-to-Work Opportunities Act) on students with disabilities. The study also will examine issues surrounding the inclusion of students with disabilities in school reform activities. The National Research Council of the National Academy of Sciences is responsible for this study. Their proposed timeline is to have a final report available by fall 1996. The findings of this group will illuminate areas in reform that are beneficial and those that are harmful to the educational outcomes of students with disabilities.

Standards. The standard-setting of recent educational reform did not initially include students with disabilities. NCTM, the leader in establishing high standards in a content area, did not consider students with disabilities in its original standard-setting activities (Shriner, Ysseldyke, & Thurlow, 1994). The central issue surrounding students with disabilities and standards is the viability of high or world-class standards that apply to all students. The creators of *Goals 2000* admit the difficulties they faced due to this issue:

> The setting of "world class standards" causes us more than a little anxiety since we believe that if national standards are to be set, they must be fair to all students (U.S. House of Representatives in Hanley, 1994).

The response to the fear that standards for "all" will "dummy-down" the standards has varied. Generally, those involved in standards agree that standards should not be reduced to the minimum competency efforts of the 1980s (Ysseldyke, Thurlow, & Geenen, 1994a). Some groups and professionals, such as the Goals 3 and 4 Technical Planning Group, maintain that standards for students with disabilities should be the same high standards set for students without disabilities and accommodations in instruction and assessment should be provided as needed (Hanley, 1994). Other groups and professionals are satisfied with standards that apply only to some students. For example, the National Academy of Sciences originally reported that only 90% of students would reach their standards[2] (Rutherford & Algren, 1990 in Hanley, 1994). Retaining high standards

[2] A more recent draft report released by the National Academy of Sciences adheres to a more inclusive principle of standards -- "All students will learn all science in the content standards (National Committee on Science Education Standards and Assessment, 1994).

that are meaningful and beneficial to all students may require allowing a range of acceptable performance. All students may continue to work toward common student outcome goals such as graduation and literacy, but within each goal area knowledge and skill standards may vary (Ysseldyke, Thurlow & Geenen, 1994a).

At the state level, 50% of states declare that their standards are for "all" students. Of these, eight percent define "all students" as including students with disabilities.

Accountability. Another recent reform initiative that has proved particularly controversial in the disability community is accountability. A natural outgrowth of the shift toward a focus on outcomes has been greater outcomes-based accountability; however, special education has been slow to join this trend. Rather, indicators of the effectiveness of special education predominantly have included monitoring staff for procedural compliance (e.g., due-process) and child count data (Ysseldyke, Thurlow, & Geenen, 1994b). Unfortunately, these measures do not indicate the extent to which students with disabilities are benefiting from the services they receive.

The general education push toward accountability has helped matters very little. Few data are collected and reported on the progress of students with disabilities. The lack of outcome-based accountability data on students with disabilities may be attributed to a number of practices, including: (a) students with disabilities are excluded from participating in accountability assessments; (b) their results are dropped before analyzing or reporting the data; and (c) their results are not identified nor disaggregated from the results of students without disabilities.

Any type of exclusion has ramifications for the special education population. Granting special education students exemptions from taking accountability assessments has led to an increase in referrals to special education (Allington & McGill-Franzen, 1992). Consequently, the special education population may grow as low-performing students are found eligible for special education and subsequently exempted from accountability measures. This is a major concern for states, such as Minnesota, that are developing graduation exams. In addition, fear of lowered test results in a high-stakes accountability system may motivate teachers to inappropriately refer low-performing students to special education or to exclude students with disabilities from their classrooms (Ysseldyke, Thurlow, & Geenen, 1994b). Some states have developed safeguards for these unethical practices. For example, Maryland requires schools to report the number of students with disabilities who do not participate in the state assessment. Kentucky simply allows for no exemptions from their state portfolio program. Other states and districts have, or are in the process of developing, more rigid rules for the exclusion of students with disabilities from assessments.

Allowing most students with disabilities to participate in accountability assessments does not guarantee that the results will be used to their benefit. The practice of dumping the results of students with disabilities leads policymakers and administrators to look at accountability data and to make decisions that affect all students based on information collected only from some students (Ysseldyke, Thurlow, & Geenen, 1994b). Over half of all states that have described procedures for using data on students with disabilities do not include these data in general progress reports (Thurlow, Scott, & Ysseldyke, 1995a). These states either report disaggregated data on students with disabilities separately (often privately) or simply discard these data before publicizing the results.

Better outcomes for students with disabilities are not assured even when their results are included in accountability progress reports. Often, data on students with disabilities are eclipsed by the results of general education students. According to a survey of state directors, less than one third of statewide assessment results are reported separately for students with IEPs (Bond et al., 1995). Failure to report on the outcomes of students with disabilities disaggregately leads to an absence of data on the effectiveness of special education services.

Large-scale and alternative assessments. Many states collect data on student outcomes that are not used for accountability purposes. In fact, the most common purpose of state assessments is to improve instruction and curriculum (Bond et al., 1995). These assessments may include those used to determine eligibility for Title I or special education services. The interaction between the purpose of an assessment (e.g., accountability, instructional improvement, etc.) and the inclusion of students with disabilities is very difficult to estimate. Many assessments are multi-purpose (i.e., serve both accountability and instructional modification purposes) and estimates of participation rates are difficult to collect. The responses of state special education directors to an NCEO survey found most did not know the extent to which students with disabilities are included in various components of their state assessments. Participation rates were unavailable (i.e., no one knows how many students with disabilities take a particular test) for 67% of existing state assessment components (NCEO, 1995). By examining the handful of estimates available, students with disabilities appear to participate at the same rate in assessments that are used for student, school or district accountability and instructional modifications purposes, though these rates vary widely by state (NCEO, 1995). Overall rates of participation in statewide assessments are highly variable, ranging from 0 to 100% (Thurlow, Scott, Ysseldyke, 1995a).

Kentucky is able to include all students in its state assessments because of its portfolio assessments (Ysseldyke, Thurlow, & Geenen, 1994). All students, including those with severe cognitive disabilities, prepare a portfolio of their work. Likewise, Vermont expects all students to have a portfolio of samples of their learning activities (Bond et al., 1995). Vermont state guidelines dictate that all portfolios, including those of students with disabilities, are eligible to be selected for the statewide portfolio sample (Bond et al., 1995). The increased popularity of alternative assessments, such as portfolio, authentic and functional assessments, appears to facilitate the inclusion of students with disabilities in large-scale assessment programs. Coutinho and Malouf (1993) noted that such alternative assessments have traditionally been the methods preferred for assessing students with severe cognitive or sensory disabilities.

States also have explored modifying existing assessments in order to allow more students with disabilities to participate. Accommodations used by states include modifying the presentation, the response options, the setting, and the timing or scheduling of the assessment. Some states allow accommodations in testing that other states prohibit (e.g., use of a calculator, scribe, etc.) (Thurlow, Scott, & Ysseldyke, 1995b). Resistance to providing accommodations may include concern over their effects on test validity, costs and complexity in identifying which accommodations suit which students. Yet, states have grown increasingly aware of the need to provide guidelines for accommodating students with disabilities in testing. From 1993 to 1995, 86% of states developed new or revised accommodation guidelines (Thurlow, Scott, & Ysseldyke, 1995b). Most states have guidelines that allow the IEP team to make the final decision on whether an accommodation is appropriate for an individual (Thurlow, Scott, & Ysseldyke, 1995b).

Goals 2000 strongly supports state efforts to provide the accommodations necessary for students with disabilities to participate in state assessments. In addition, the re-authorization of IDEA is likely to require the inclusion of students with disabilities in school-wide assessments, including district and state accountability programs. Unfortunately, students with disabilities are not consistently included nor provided with accommodations in national assessment programs. Consequently, neither state nor national data collection efforts provide adequate information on the educational outcomes of students with disabilities.

The National Center on Educational Outcomes was established, in part, to assist in remedying this predicament. In the next section, we present the results of a search for data on the educational outcomes of students with disabilities. First, we describe the methods (e.g., types of data collected, participation rates of students with disabilities, etc.) used by these programs to collect data on students with disabilities and then present a summary of their findings. Many other national and state educational evaluation programs not mentioned here include students with

disabilities to varying degrees; however, they often fail to present their results disaggregately for students with disabilities. Only programs that report the results of students with disabilities on large-scale assessments are included.

Progress Toward the Routine Reporting of National and State Outcomes for Students with Disabilities

As part of NCEO's effort to encourage the measurement of educational outcomes and indicators for students with disabilities, we survey current state and national efforts to collect these data. Much of what we know about the educational outcomes of students with disabilities is based on attempts to document the extent to which these students are successful in their transition to the world of work or postsecondary education following high school. There are almost no national outcome data for preschool and elementary-age students who receive special education (NCES, 1993). In this report, we recount what is currently known about educational outcomes of students with disabilities at the state and national levels.

The objective of summarizing what is known about the educational outcomes of students and young adults with disabilities is to report on the efficacy of the programs that serve them and to highlight areas in which more research and consistent data reporting are needed. In this section we examine the participation of students with disabilities in major national and selected state data collection programs.

National Assessments

The inclusion of students with disabilities in national educational data collection programs has been fairly minimal (McGrew, Thurlow, & Spiegel, 1993). However, several changes have occurred in these programs during the past five years, leading to a point where we may soon have more data on these students.

National Assessment of Educational Progress (NAEP)

This congressionally mandated assessment program is the largest and most well known indicator of the success of America's educational system. NAEP has been collecting data on 4th, 8th and 12th grade student performance in a number of subject areas (e.g., reading, math, science, etc.) since 1969. Since 1990, NAEP has collected data at the state and national levels, allowing for a limited number of state-by-state and international comparisons.

Currently, NAEP excludes approximately half of all students with disabilities. This exclusion rate varied in 1990 from 33% to 87% among individual states (McGrew, Thurlow, Shriner, & Spiegel, 1992). NAEP has not provided accommodations in testing, but there are plans to do so in the 1996 administration. Guidelines for deciding whether a student was to be excluded from NAEP in 1990 were the following:

1) The student with an IEP is mainstreamed less than 50 percent of the time in academic subjects and is judged to be incapable of taking part in the assessment, or

2) The IEP team has determined that the student is incapable of taking part meaningfully in the assessment.

When there is a doubt, the student is included in the assessment (Mullis, 1990).

These guidelines, which are open to variations in interpretation, resulted in the wide range of exclusion rates. Furthermore, the guidelines allowed for the decisions to be made by IEP teams in some states, by a teacher in others, and by a principal in still others. The vagueness of guidelines was complicated by several other sampling design issues (see McGrew et al., 1992). In addition, individuals who are incarcerated, dropouts, and/or enrolled in special schools for students with disabilities generally were excluded from NAEP and other NCES surveys and assessments (Houser, 1995).

Attempts to increase the participation of students with disabilities in NAEP have engendered considerable activity in recent months. Much of this activity resulted from a National Academy of Education (NAE) follow-up study of students with disabilities excluded from the 1994 NAEP reading assessment (fourth grade) and from field testing of new inclusion guidelines and the use of accommodations. In May of 1995, the National Assessment Governing Board (NAGB), which is charged with overseeing NAEP, initially rejected proposals to use accommodations in NAEP for fear of compromising the technical adequacy of the assessment or losing trend data (Lawton, 1995). In August, NAGB did not agree to change inclusion/exclusion rules for the 1996 NAEP assessments, despite pressure to do so from a number of government, research and advocacy groups (Lawton, 1995).

A more inclusive policy was adopted later in August of the same year and will explore the effects of both inclusion rules and accommodations on NAEP test taking patterns and results. The NAEP sample will include three subsamples of students with disabilities: one group will be selected using previous NAEP rules; a second group will be selected by new and more inclusive guidelines; and a third group will be selected by the new guidelines and allowed to use accommodations (e.g., extra time, one-on-one administration, etc.) (Lawton, 1995). The state-level assessments are scheduled to include two groups, one selected by previous NAEP guidelines for participation and one selected using more inclusive participation rules (Lawton, 1995). In addition, the Department of Education may allocate a quarter of a million dollars to conduct research on alternative NAEP versions that more readily allow students with disabilities to participate (Lawton, 1995). Consequently, future NAEP administrations may provide data on the educational outcomes of students with disabilities.

National Longitudinal Transition Study (NLTS)

This study sought to document the educational outcomes of students with disabilities during high school and post secondary endeavors. Data on 8,000 special education students, ages 13 to 21, were collected on two separate occasions. The first wave of data collection, occurring in 1987, consisted of parent or guardian interviews and school record reviews. In addition, a mail survey on school policies, programs and staff characteristics was sent to administrators of the schools the youth attended. A follow-up telephone interview was administered in the fall of 1989 to a subsample (N=800) of these youth. This data collection effort was part of a Special Studies program funded by the Office of Special Education Programs and thus was of limited duration. It ended in 1991.

National Education Longitudinal Study of 1988 (NELS:88)

This study examines a cohort of eighth grade students' progress through secondary school and transition into the world of work and post secondary education. Four waves of data collection occurred during the six year study. Data were collected from the students, their parents, teachers and school records. The sample size (originally N=26,432) of NELS:88 varies through the study due to freshening the sample in order to account for dropouts, transfers and subjects found to be ineligible (Scott & Ingels, 1992).

Eligibility for students with disabilities was determined by school coordinators' "independent and individual evaluations of the students' ability to complete the NELS:88 survey" (Ingels, Rizzo, & Rasinski, 1989). At baseline, three and a half percent of the total sample was excluded due to a disability, 3.04% due to a mental disability and .41% due to a physical disability (Ingels, 1991). Those who were excluded were tracked for enrollment and re-evaluated for eligibility prior to subsequent waves of data collection (Ingels et al., 1989). For example, 1,598 students were found ineligible during the first data collection period (i.e., 1988), 316 of these students were later found to be eligible and were included in the 1990 round of data collection (Scott & Ingels, 1992).

Even with a three percent exclusion rate, NELS:88 contains data on a large sample of students with disabilities. However, few analyses have been completed on this subsample of students, primarily due to the difficulty associated with identifying students with disabilities in this data set. Identifying disability status within NELS:88 is contingent upon maternal responses to two items: "In your opinion, does your eighth grader have any of the following problems?" and "Has your eighth grader ever received special services for any or all of the following?" (Hodapp & Krasner, 1994). Concerns about the accuracy of child identification by the mother and the absence of information about the severity of the disability raises questions about the validity of any attempts to identify students with disabilities within the NELS sample (Hodapp, 1994). These concerns led researchers Hodapp and Krasner (1994) to avoid examining common disabilities such as mental retardation, emotional problems and learning disabilities and to focus on more "clear-cut disability conditions" (i.e., sensory and orthopedic impairments) in their secondary data analysis of NELS.

National Adult Literacy Survey (NALS)

This study was conducted to survey the nature of literacy in America. During 1992, 13,600 adults (16 and older) residing in households across the country, 1,150 inmates of 80 federal and state prisons, and 1,000 adults in each of 12 states participating in the state-level study were surveyed (total = 26,000) (Haigler, Harlow, O'Connor, & Campbell, 1994). Included on the survey were items tapping disability status. No mention of inclusion or accommodation procedures was found (Haiger et al., 1994; Kirsch, Jungeblut, Jenkins, & Kolstad, 1993).

Early Childhood Longitudinal Study

In 1995, the National Center for Education Statistics (NCES) initiated the development of a longitudinal study that would start with students in kindergarten and continue to follow them for at least five years. The possibility of including students with disabilities from the beginning and of making sure students stayed in the sample after being identified as having a disability (most often, in grade 3 or 4) has been addressed. The panel working on the development of the study is identifying, from the start, assessments that will be appropriate for all students, including those with disabilities.

Another part of the Early Childhood Longitudinal Study that is still under consideration is the inclusion of a birth cohort that also would be followed for five years. With this additional cohort, longitudinal data would become available on children from birth to ten years of age.

State Assessments

Most states collect data on students with disabilities; however, most often this information documents the number of students served (i.e., child count) and types of resources provided (e.g.,

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teacher education level, funding, etc.). In this section, we highlight a sample of states that report some type of outcome data on students with disabilities.

Connecticut

Within Connecticut's state report, A Profile of Our Schools (Connecticut State Board of Education, 1996), there is a section on special education that reports demographics, child count, staffing characteristics, expenditures and achievement data. The achievement data are collected from the performance of students with disabilities on the Connecticut Mastery Tests (CMT) and the Connecticut Academic Performance Test (CAPT). During the 1993-94 school year, roughly 60% of students with disabilities in grades four, six and eight participated in the CMT and 39% took the CAPT (Connecticut State Board of Education, 1996).

Louisiana

Data on students with disabilities are presented within the Louisiana Department of Education Special Education Data Report (Borne & Borel, 1995). These data include child count and ethnic and gender comparisons as well as student achievement on the state standardized assessment, Louisiana Educational Assessment Program in Language (LEAP). This report includes an estimate of the number of students with disabilities who participated in the state assessments. These figures range between 3,500 and 4,000 for each accountability grade (3, 5 and 7). However, this report does not identify the total number of students with disabilities enrolled in grades three, five and seven to use to calculate the percentage of students with disabilities who are participating in Louisiana's state assessments.

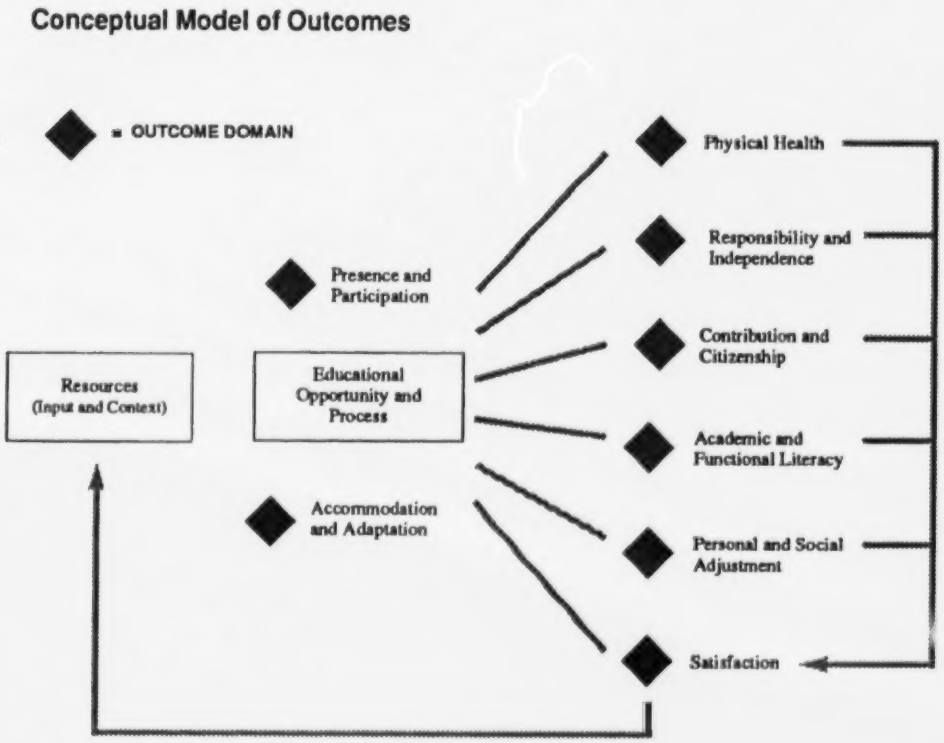
New York

New York collects a variety of data on students with disabilities in order to evaluate the effectiveness of the programs that serve them. Included in this accountability system are data on the number of students with disabilities who participated and passed (1) state competency exams (2) occupational education exams; and (3) second language proficiency exams. In addition, the Consolidated Special Education Performance Report provides information on the types of services received by students with disabilities in New York, types of disabilities and the results of a study on the types and prevalence of attainment of IEP objectives. According to the New York State Education Department, greater numbers of students with disabilities are participating in statewide assessments (New York State Education Department, 1995). The number of students with disabilities who participate in state assessments is presented; however, there is no way to tell from this report the participation rate of students with disabilities. Once again, information on the total number of students with disabilities at each assessment grade level is not provided.

Data on Educational Outcomes for Students with Disabilities

The NCEO model of outcomes and indicators (see Figure 1) is used here to organize the information that exists on the outcomes of students with disabilities for different developmental periods. This model was developed though a consensus building process involving stakeholders from the community, education professionals and policymakers. The model represents areas that were identified to be important indicators of the effectiveness of education for all students, including those with disabilities. A recent survey of Special Education directors found most to be familiar with this model (NCEO, 1995). In addition, an analysis of state standards found over 95% of states to target one or more of the non-academic areas contained within this model.

Figure 1. NCEO Conceptual Model of Education Outcomes



National Assessments

The following section summarizes the educational outcomes of students with disabilities as described by national assessment programs.

1. Preschool Educational Outcomes

No national data currently exist on preschool outcomes. The scheduled Early Childhood Longitudinal Study (birth cohort) promises to provide data on these students in the future.

2. Elementary Educational Outcomes

No national data exist. The scheduled Early Childhood Longitudinal Study (kindergarten cohort) promises to provide data on these students in the future.

3. Middle-School Educational Outcomes

Presence and participation. Eight percent of students with disabilities dropped out of school before enrolling in ninth grade (Wagner, 1991a). The dropout rates, however, varied considerably with the student's disability. For example, students with emotional or behavioral disabilities were found to be significantly more likely than students with other types of disabilities or students without disabilities to drop out of school.

Academic and functional literacy. Using NELS:88 data, researchers Hodapp and Krasner (1994) were able to describe the academic achievements of four groups of students with disabilities in 8th grade. These researchers concluded that the achievement of students who are visually impaired, hearing impaired, deaf or orthopedically impaired is comparable to that of students without disabilities (Hodapp & Krasner, 1994). The average GPAs for these groups were: visually impaired = 2.81; hearing impaired = 2.78; deaf = 2.70 and orthopedically impaired = 2.85 (Hodapp & Krasner, 1994). Students with sensory or orthopedic impairments on average received slightly lower scores than the remainder of the sample on standardized assessments (Hodapp & Krasner, 1994). The reading and math scores of these students are shown in Table 2.

Table 2. Scores of Students with Sensory and Orthopedic Disabilities on NELS Achievement Tests

	Visually Impaired	Hearing Impaired	Deaf	Orthopedically Impaired
Reading	48.2	49.2	44.3	49.5
Math	46.4	49.6	47.6	49.2

The average score on this NELS assessment was 50 (Hodapp & Krasner, 1994). These researchers are currently conducting additional analysis on these data.

4. Secondary Educational Outcomes

Because of the National Longitudinal Transition Study (NLTS), there is a wealth of information on the educational outcomes of secondary students and young adults with disabilities. Much of this information suggests that adolescents with disabilities, as a group, and students with emotional disabilities in particular, are at-risk for failing courses and competency exams, dropping out of school, and unemployment. However, many of these outcomes are confounded by poverty and other input and process variables that affect education.

Presence and participation. Students with disabilities are absent from school an average of 14.9 days per year (Wagner, 1992). Students identified as having emotional disabilities are absent from school an average of 17.7 days (Wagner, 1992).

Numerous national studies have documented lower graduation rates for students and adults with disabilities than for those without disabilities. For example, the 1994 Harris survey of adolescents and adults (age 16 and over) found people with disabilities to be twice as likely as those with no disabilities to have not completed high school. The National Longitudinal Transition Study (NLTS) reported that only 56% of the youth with disabilities in their sample graduated (as compared to 83% of students without disabilities), 32% dropped out, 8% left school because they reached their maximum age of entitlement, and 4% were expelled or suspended (Wagner, 1991b). Three-fourths of those who graduated received regular diplomas (Wagner, 1991b). NLTS data also suggest program and school characteristics that may be associated with variation in dropout rates. Specifically, students who attended smaller high schools and/or enrolled in occupational training courses were less likely to drop out (Wagner, 1991b). Likewise, receipt of tutoring assistance or personal counseling was significantly related to lower dropout rates (Wagner, 1991b).

The National Educational Longitudinal Study of 1988 (NELS:88) reported data on dropout rates of students with and without disabilities during 8th, 9th and 10th grade. This study found special education students to be two-and-a-half times more likely than other students to drop out between 8th and 10th grade (Kaufman, Bradby, & Owings, 1992). In addition, NELS:88 data indicated that students identified by teachers as emotionally troubled were nearly six times as likely to drop out as other students (Kaufman et al., 1992).

The National Council on Disability, reporting OSEP data on trends, noted that students with disabilities who graduate with diplomas increased from 42% in 1986 to 46% in 1989 (Westat, 1991 in National Council on Disability, 1993). During this time, students with disabilities who graduated with certificates decreased from 18% to 10% and students with disabilities who dropped out increased from 25% to 27% (Westat, 1991 in National Council on Disability, 1993). OSEP's most current estimates of graduation rates for students with disabilities found a reduction in those graduating with a standard high school diploma. During the 1991-92 school year, these students comprised 43.9% of students with disabilities exiting the educational system (U.S. Department of Education, 1994). Yet, from 1989 to 1991-92, the rate of dropping out among students with disabilities also declined slightly from 27% to 22.4%. Some of these trends may be due to changes in graduation requirements or exit status classifications among states rather than increases in the effectiveness of these programs. In addition, OSEP categories have not been very sensitive to state changes in categorizing student exit conditions. For example, some states have reported increasing numbers of students within the status unknown category (U.S. Department of Education, 1994). In an attempt to collect more specific exiting information on the students in the "unknown category," OSEP expanded its categories (e.g., returned to regular education, died, moved, etc.) to more closely compare to the data collected by NCES on the dropout rate in the general student population (U.S. Department of Education, 1994). These changes are likely to more readily account for changes in state definitions of exit categories.

Variations were found to exist among categories of students with disabilities. Approximately half of all students with learning disabilities, hearing, visual or orthopedic impairments graduated with a diploma (U.S. Department of Education, 1994). Graduation with a diploma was the most common basis of exit for all disability groups but one: only 28% of students with serious emotional disturbances graduated with a diploma (U.S. Department of Education, 1994). This group of students had the highest incidence of dropping out of school (35%) and the highest incidence of unknown reasons for exiting (29%) the educational system (U.S. Department of Education, 1994). Students with mental retardation were more likely than other disability groups to graduate with a certificate (28%)(U.S. Department of Education, 1994). Students with

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multiple disabilities were most likely to reach the maximum age of their school entitlement (13%)(U.S. Department of Education, 1994).

Academic and functional literacy. According to the National Council on Disability (NCD), students with disabilities were out-performed by students without disabilities on both the Scholastic Aptitude Test (SAT) and the National Assessment of Educational Progress (NAEP) (National Council on Disability, 1993).

Wide variability in the performance of groups of students with disabilities on standardized tests was identified by NLTS. In these data, 72.2% of visually impaired and 62% of deaf students had passed state or district competency tests (Wagner, 1992). However, only 21.2% of students identified as having mental retardation and 36.6% of students identified as having and emotional disability successfully passed minimum competency tests (Wagner, 1992). Overall, NTLS found 44.7% of students with disabilities who took competency tests to pass all of these tests, 31.9% passed part of the test, and 23.4% did not pass any of the test (Wagner, 1992). These figures do not indicate the extent to which all students with disabilities are successfully meeting the requirements of competency tests because 38% of the NLTS sample had been exempted from these tests.

By examining student grades, NLTS provides more complete data on the academic achievement of students with disabilities. NLTS was able to collect data on grades for 90% of its sample and found that 31.1% of students with disabilities had received failing grades during the previous year (Wagner, 1992). The average GPA among students with disabilities who had completed four years of high school was 2.3, which is below the national average of 2.6 (U.S. Department of Education, 1994). Once again, there was wide variability in academic success among disability categories. Over three-fourths of students classified as having an emotional or behavioral disability had failed one or more courses and these students' grade point average of 1.7 was one of the lowest in the study (Wagner, 1995). Students with sensory or orthopedic disabilities received much higher grade point averages (e.g., deaf students had an average GPA of 2.6) and were less likely than other students with disabilities to fail courses (Wagner, 1992).

NLTS data found that higher functioning students were more likely to have failed one course in the past year (Wagner & Shaver, 1989). This finding may be a function of program type wherein higher functioning students enroll in more difficult courses and are at greater risk for failure. Program type and placement was identified by NLTS to be associated with indicators of academic success. The average GPA was 2.18 for students placed in special education courses and 1.89 for students with disabilities placed in general education courses (Wagner, 1992). Students placed full time in regular education academic classes were more likely than students who spent just half of their time in these classes to fail at least one class (U.S. Department of Education, 1994). On average, students with disabilities attained higher grades in nonacademic (M=2.24) and vocational courses (M=2.04) than academic courses (M=1.85)(Wagner, 1992). Occupational training was associated with additional positive student outcomes, including an increase in the number of days students attended school and the likelihood that they would be promoted to the next grade (Wagner, 1992). Work experience programs were also associated with positive student outcomes, including reduced rates of failing a class and dropping out (U.S. Department of Education, 1994).

NLTS data also indicated that students with disabilities earned, on average, a total of 22 credits upon graduation (U.S. Department of Education, 1994). This is comparable to the 23 credits earned by graduates in the general population (U.S. Department of Education, 1994). However, students with disabilities were more likely than students in the general population to have earned a higher proportion of their credits in vocational and life skills courses (U.S. Department of Education, 1994).

Though little data exist on the early childhood and elementary educational outcomes of students with disabilities, NLTS data on rate of retention offers some insight into the history of academic success for these students. These researchers report that three-fourths of secondary students with disabilities were older than the typical age of students at their grade level (Wagner, 1991a). The rate of retention during the year that students' records were reviewed was 8.6% (Wagner, 1991a). Students identified as having emotional disabilities were most likely to be retained during that year (16.1%)(Wagner, 1992).

Personal and social adjustment. NLTS data indicate that almost half of high school students with disabilities participate in some type of social group (Wagner, 1992). Deaf students (59.1%) and students with learning disabilities (45.2%) were among the most likely to participate in a social group (Wagner, 1992). Students who are multiply handicapped (30.1%) were least likely to belong to a school or community group (Wagner, 1992). According to the responses of parents of students with disabilities to the NLTS survey, 14% of all high school students with disabilities see a friend outside of school less than once a week (Wagner, 1989). Students with multiple handicaps (43.6%) or those who are deaf and blind (64.9%) are most likely to meet this definition of socially isolated (Wagner, 1989). Students classified as seriously emotionally and behaviorally disturbed were more likely than students with other types of disabilities to frequently see friends outside of school (Wagner, 1995). However, students with emotional and behavioral disabilities were much less likely to participate in school clubs or groups (Wagner, 1995).

Social adjustment may also be indicated by students' ability to remain out of trouble with the law. NLTS data indicate that nine percent of high school students with disabilities have been arrested (Wagner, 1989). This arrest rate jumps considerably for those students with emotional or behavioral disabilities.

5. Postsecondary Educational Outcomes

Presence and participation. A recent study of college freshmen with disabilities found that students with disabilities beginning post-secondary education were more likely to enroll in two-year colleges (41%) than universities (18%) (Henderson, 1995). In 1994, students with disabilities comprised 9.2% of all full-time college freshmen (Henderson, 1995). The most common disability self-identified by college freshmen was learning disabilities (32.2%) (Henderson, 1995).

NLTS reported that high school or middle school dropouts with disabilities were much less likely to be competitively employed or attending post-secondary schools and more likely to have been arrested than youths with disabilities who did not drop out (Wagner, 1992). The overall rate of employment of out-of-school young adults with disabilities was identified by NLTS to be 19%--this is significantly lower than the rate for those without disabilities (60%)(Marder & D'Amico, 1992). Seven of ten of the NLTS youths with disabilities who had been out of secondary school for up to two years had held at least one paid job in the preceding year (Marder & D'Amico, 1992). An International Center for the Disabled (1989) survey of 1,000 parents of youth over age 16 with disabilities found only ten percent of these youths to be working full time despite not being full time students. The overall rate of unemployment of adults with disabilities as reported by the Harris Survey of Americans with Disabilities (1994) is high (i.e., 67%).

Young workers with disabilities were found by NLTS to be more likely than their counterparts without disabilities to be working at lower-status, menial jobs (Marder & D'Amico, 1992). Fourteen percent of young adults with disabilities were reported by NLTS to have enrolled in some form of post-secondary education or training in the preceding year. This is a much lower rate than occurs in a matched sample of cohorts without disabilities (Marder & D'Amico, 1992).

Responsibility and independence. NLTS data indicate that only 13 percent of young adults with disabilities are living independently during the first few years after high school (Marder & D'Amico, 1992).

Contribution and citizenship. Twelve percent of people with disabilities had been arrested within one year after secondary school (Marder & D'Amico, 1992). This is a much higher rate than for the general population (eight percent) (Marder & D'Amico, 1992). One-fourth of students with emotional or behavioral disabilities were arrested sometime after their last year of high school (Wagner, 1995). By three to five years out of high school, 58% of youth with emotional or behavioral disabilities had been arrested at some time (Wagner, 1995). The arrest rate jumps to 73% for young adults with emotional or behavioral disabilities who had dropped out of school (Wagner, 1995).

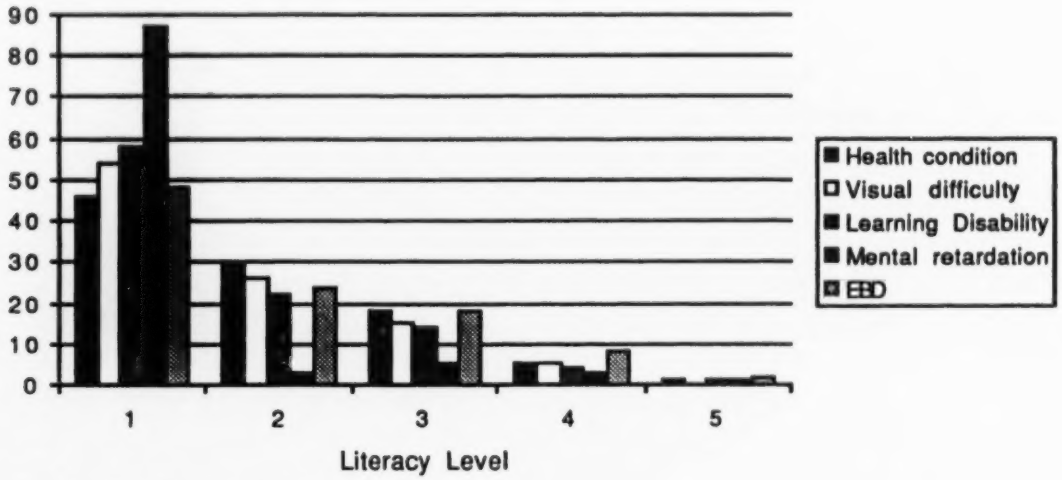
Following high school, young people with emotional and behavioral disabilities were less (42.3%) likely to be registered to vote than were young people with other disabilities (50.8%) or young people in the general population (66%) (Wagner, 1995).

Academic and functional literacy. The National Adult Literacy Survey provided data on the literacy of adults with disabilities and adults with disabilities in prison. These findings indicated that there are more adults with disabilities in prison (36%) than in the general population (26%), though the authors are careful to note that this over-representation may be a function of additional evaluations conducted by the criminal justice system (Haigler et al., 1994). Specific disabilities that were more prevalent among inmates than their nonadjudicated counterparts were emotional and mental disorders and learning disabilities (Haigler et al., 1994). Another reported finding was that imprisoned adults with learning disabilities were significantly poorer readers than those who were not in prison (Haigler et al., 1994). In general, adults without disabilities performed better than those with disabilities, regardless of incarceration (Haigler et al., 1994). Examining the same NALS data led researchers Kirsch et al. (1993) to conclude that:

> Without an exception, adults with any type of disability, difficulty or illness were more likely than those in the total population to perform in the lowest literacy levels (p. 43).

Further analysis of these data found literacy abilities, as measured by NALS, to be strongly associated with disability category (see Figure 2). Specifically, 85% of adults with mental retardation performed at the lowest literacy levels (Kirsch et al., 1993). Fifty-eight to sixty percent of adults who participated in NALS and identified themselves as having learning disabilities, failed to exceed the lowest of five literacy levels (Kirsch et al., 1993). One percent of adults with learning disabilities, as compared with three to four percent of those without disabilities, demonstrated literacy skills at the highest level on the NALS scale (Kirsch et al., 1993). Adults identified as having any mental or emotional conditions also tended to perform below the general population, with 45 to 51% of adults in this group demonstrating only the lowest level of literacy and only two percent performing at the highest level (Kirsch et al., 1993). Figure 2 is a graph of the prose literacy levels, from low (1) to high (5), for the average literacy performance of adults with various types of disabilities (Kirsch et al., 1993, p. 44).

Figure 2. Performance of Adults with Disabilities



Source: Kirsch et al., 1993, p.44

State Assessments

Currently, few states systematically report data on students with disabilities, beyond child count data. Yet, according to the results of a recent NCEO (1996) state survey, 20 of the 44 state directors who responded reported that they can identify data on the educational outcomes of students with disabilities. Thus, even states that do include and can identify students with disabilities in their state assessment programs do not regularly report these results disaggregated from those of students without disabilities. In addition, state-by-state comparisons of the indicators that are reported are confounded by differing state policies on inclusion in curricula and testing programs, graduation rules, etc. Therefore, drastically different estimates are reported. For example, the National Council on Disability (1993) noted that a review of state and agency 1986-89 graduation rates of students with disabilities found some states to report graduating as many as 97% of their special education students and other states graduated as few as 25%. According to the National Council on Disability, this variability is not likely to be due solely to differences in effectiveness among states' educational systems; rather state variations in graduation and diploma granting guidelines are likely to account for much of this range in graduation rates (see also Thurlow, Ysseldyke, & Anderson, 1995). Due to the incredibly complex and variable state policies on collecting and reporting on the educational outcomes of students with disabilities, only a few states are profiled here. Though most states, including those highlighted here, collect child count and other process or input data, only data that indicate the educational outcomes of students with disabilities are presented.

Connecticut

1. Elementary Outcomes

Academic and functional literacy. Thirty-one percent of fourth grade students with disabilities scored at or above the state goal for mathematics (Connecticut State Board of Education, 1995). Results from the reading subtest of the Connecticut Mastery Tests (CMT) found 22.8 % of fourth grade students with disabilities meeting the state criteria (Connecticut State

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Board of Education, 1995). Slightly more than 16% of fourth grade students with disabilities met state criteria for writing (Connecticut State Board of Education, 1995).

2. Middle-School Educational Outcomes

Academic and functional literacy. Of the sixth grade students with disabilities who participated in the Connecticut Mastery Tests, 20.6% scored at or above the state goals for mathematics, 31.3% for reading, and 20.8% for writing (Connecticut State Board of Education, 1995). Among eighth grade students with disabilities who took the CMT, 18.6% met state criteria for mathematics, 29.2% for reading, 14.1% for reading (Connecticut State Board of Education, 1995). In general, 50% of students statewide met these criteria for math, reading and writing (Connecticut State Board of Education, 1995).

3. Secondary Educational Outcomes

Presence and participation. During the 1994-95 school year, 1,910 students graduated with diplomas, 634 dropped out and 99 graduated with a certificate of completion (Connecticut State Board of Education, 1995). Fifty-three left school upon reaching the maximum age of 21 (Connecticut State Board of Education, 1995).

Academic and functional literacy. Approximately ten percent of the tenth graders with disabilities who participated in the Connecticut Academic Performance Test (CAPT) scored at or above the state goal for this test (Connecticut State Board of Education, 1996).

Louisiana

1. Elementary Educational Outcomes

Academic and functional literacy. Of the third graders with disabilities in Louisiana who participated in the Louisiana Educational Assessment Program in Language (LEAP), 65% successfully met state criteria for language arts and 64% for mathematics (Borne & Borel, 1995). In grade five, 55% of students with disabilities who participated in the LEAP attained the state scaled score for language arts and 58% for mathematics (Borne & Borel, 1995).

2. Middle-School Educational Outcomes

Academic and functional literacy. In grade seven, 50% of students with disabilities who participated in the LEAP attained the state scaled score in language arts, 44% in mathematics, and 49% in written language (Borne & Borel, 1995).

3. Secondary Educational Outcomes

Presence and participation. Thirty-one percent of students with disabilities dropped out of high school (Borne & Borel, 1995).

Academic and functional literacy. Fifty-two percent of students with disabilities who took the Graduate Exit Examination (GEE) attained the cut-off score in language arts, 53% in mathematics; 82% in written composition, 60% in science, and 67% in social studies (Borne & Borel, 1995).

New York

1. Elementary Educational Outcomes

Academic and functional literacy. Among third grade students with disabilities who participated in the 1993-94 Pupil Evaluation Program (PEP), 33% scored above the state reference point in reading, 67.2% in mathematics, and 55.4% in writing (New York State Education Department, 1995).

2. Middle-School Educational Outcomes

Academic and functional literacy. Among sixth grade students with disabilities who participated in the 1993-94 PEP, 31% scored at or above the state criterion in reading achievement and 52.2% in mathematics (New York State Education Department, 1995). During the same school year, 45.5% of eighth grade students with disabilities who participated in New York's regents preliminary competency tests for reading scored at or above the state reference point (New York State Education Department, 1995). Sixty-two percent of eighth grade students with disabilities who participated in state competency tests for writing scored at or above the state reference point (New York State Education Department, 1995).

3. Secondary Educational Outcomes

Presence and participation. Twenty percent of students with disabilities between the ages of 14 and 21 dropped out in 1993-94 (New York State Education Department, 1995). Twenty percent of students with disabilities within this age group graduated from high school with a diploma, ten percent graduated with an IEP diploma, 7.3% exited high school with a local certificate and one percent reached maximum age (New York State Education Department, 1995).

Academic and functional literacy. During the 1993-94 school year, 61.3% of ninth grade students with disabilities who participated in New York's regents preliminary competency tests of reading skills scored at or above the state reference point (New York State Education Department, 1995). Fifty-nine percent of ninth grade students with disabilities who participated in state preliminary competency tests of writing skills scored at or above the state reference point (New York State Education Department, 1995). Among all secondary school students with disabilities who participated in New York's regents competency tests, 65.3% passed the reading, 42.3% passed the mathematics, 65.8% passed the writing, 45.1% passed the science, 41.6% passed the global studies, and 58.8% passed the US history and government state competency exams (New York State Education Department, 1995). In addition, 57% of students with disabilities who took the Second Language Proficiency Examinations passed, 58.9% of students with disabilities who participated in the Introduction to Occupational Education Proficiency Examination passed, and 66% of students with disabilities who took the Advanced Occupational Education Proficiency Examinations passed (New York State Education Department, 1995).

Summary of National and State Findings

What has been documented about the educational results of students with disabilities presents a mixed picture. National assessments of student educational outcomes indicate that educational success varies among groups of students with disabilities. Students with hearing or visual impairments are performing at levels comparable to students without disabilities. Students with emotional and behavioral disabilities are performing at lower levels and dropping out more often than other students. Students with multiple handicaps and those who are deaf and blind are most likely to experience social isolation during high school.

Student educational outcomes were also found to be a function of the programs that serve them. Students with disabilities who participated in occupational training courses, received tutoring assistance or personal counseling had significantly lower dropout rates. State reports on the rates of passing competency tests for students with disabilities who take the tests indicate that from one-third to two-thirds are successful. Furthermore, the proportion of students with disabilities who are meeting state established competencies varies by the content area assessed and the state. These variations are likely to be a function of the rate at which students with disabilities participate in these assessments, the extent to which accommodations in testing are available and the level of difficulty of the test and cut-off point. The participation rate of students with disabilities was not consistently reported; therefore, the data presented should be viewed with caution since they may not reflect the experiences of all or even most students with disabilities in those states.

There has been progress toward more regularly reporting the educational outcomes of students with disabilities. However, there is a paucity of data on the educational outcomes of younger students (e.g., early childhood, elementary and middle school) and data to indicate the extent to which non-academic outcomes are being achieved (e.g., physical health, responsibility and independence, contribution and citizenship, personal and social adjustment, etc.). In addition, few states currently report on the educational outcomes of students with disabilities. The three states highlighted in this report are notable exceptions. Yet, the data they present focus on minimum competency rather than high standards and represent the educational progress of only those students with disabilities who participated in competency testing. Furthermore, there are few national or statewide attempts to link outcomes data to the special services, curricular or instructional accommodations provided to special education students.

Discussion

The general trend in education reform has been a shift away from procedural regulations and mandates toward an emphasis on greater flexibility at the expense of greater accountability. This shift is apparent in the development of numerous state and national education goals, standards and assessments during the past five years. However, special education programs and policies have lagged behind this movement toward results-oriented education reform. Historically, special education has emphasized protecting the rights of students and providing access to general education classrooms. Thus, accountability in special education most often focuses on procedural compliance or child count. Ahearn and Crocker (1995) note that this form of accountability is incomplete.

The paucity of data on the educational outcomes of students with disabilities indicates that system results and individual student progress toward standards are insufficiently collected and reported for students with disabilities. Without data to indicate the extent to which special education students are benefiting from their education, improvements are unlikely. Few would argue that students with disabilities don't deserve to benefit from education reform, and even fewer would agree that their education should suffer as a consequence of attempts to reform American education (as in the case of those denied access into general education classrooms under high-stakes accountability systems). Therefore, a number of national and state legislation and non-legislated groups have begun to address the issue of including students with disabilities in standards-based reform.

Federal legislation, such as Goals 2000, has used the language that education reform is for all students. To support this effort a panel on the implications of Goals 2000 for students with disabilities has been formed to study the effects of standards-based reform on the educational outcomes of students with disabilities. In addition, the current House and Senate drafts of the re-

authorization of IDEA include provisions for the participation of students with disabilities in all large-scale assessments. The reauthorized Title I entitlement program (IASA) supports the participation of students with disabilities in assessments and promotes reporting their results separate from other students. In addition, the most widely known assessment of America's educational achievement, the National Assessment of Educational Progress (NAEP), has begun to field test the participation of larger numbers of students with disabilities and the use of accommodations in its national assessment program.

The National Center on Educational Outcomes (NCEO) works with federal and state agencies to promote the inclusion of students with disabilities within the larger context of reform. NCEO has conducted annual surveys of state directors on participation in state assessments, documented the availability of national and statewide assessment results for students with disabilities, and developed self-study guides on outcomes and indicators for students with disabilities. NCEO is currently developing guidelines for the participation and accommodation of students with disabilities in state assessments, while offering on-going technical assistance to many state and national groups attempting to implement assessment and accountability systems that include students with disabilities.

Several state-level initiatives are underway to assist the inclusion of students with disabilities in education reform. One initiative is a State Collaborative on Assessment and Student Standards (SCASS), created jointly by NCEO and the Council of Chief State School Officers. The Special Education SCASS is addressing critical issues in the assessment of students with disabilities, including the development of assessment standards and measures. The Office of Special Education Rehabilitative Services (OSERS) has awarded grants to North Carolina, Wisconsin and a collaborative between Maryland, Kentucky and NCEO. The Office of Educational Research and Improvement has awarded grants to Delaware, Maryland, Michigan, Minnesota, North Carolina, North Dakota, Oregon, Pennsylvania and a collaborative of 22 states to address state assessment issues, many of them focusing specifically on disability issues. These and other efforts will need to be watched over time for some answers to questions that arise when including students with disabilities in statewide reform.

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